

CLAIMS

1. A sealant or tissue generating product comprising a (coagulated) plasma matrix, one or more growth factors, at least one phospholipid and a protein scaffold 5 for the generation of said tissue (or the coagulation factor VII).

2. The sealant or tissue generating product according to claim 1, wherein said plasma matrix is a coagulated matrix of platelet rich plasma or a coagulated 10 matrix of platelet poor plasma.

3. The sealant or tissue generating product according to the claim 1 or 2, wherein the growth factor is selected from a group consisting of human (recombinant) tissue factor (rhTF), the human (recombinant) platelet-derived growth factor (rhPDGF), the human (recombinant) transforming growth factor (rhTGF), the human (recombinant) insulin-like growth factor (rhIGF), the human (recombinant) epidermal growth factor (rhEGF) or the human (recombinant) hepatocyte growth factor (rhHGF),....

20 4. The tissue generating product according to any of the preceding claims, wherein the coagulated plasma matrix is a platelet rich plasma having a platelet concentration higher than 1,500,000 platelets per microlitre, preferably comprised between 1,500,000 25 platelets per microlitre and 8,000,000 platelets per microlitre of the matrix forming agents.

5. The tissue generating product according to any of the preceding claims which further comprises at least one buffer and at least one antibiotic.

30 6. The sealant or tissue generating product according to the claim 5, wherein the antibiotic has an anti-osteoclast effect.

7. The tissue generating product according to any of the preceding claims 1 to 6, wherein the protein

scatffold for the generation of the tissue is a protein scatffold suitable for the generation of a hard tissue such as bone or cartilage, or a soft tissue such as skin or an epithelial tissue of the stomach.

5 8. The tissue generating product according to claim 7, wherein the protein scatffold for the generation of a tissue is an osteo inductive bone substitute.

10 9. The tissue generating product according to claim 8, wherein the osteo inductive bone substitute is selected from the group consisting of the compound PEPGEN P-15 or the compound PEPGEN P15flow, the PEPGEN OSIGRAFT, the compound OSIGEL or the compound INFUSE.

15 10. The tissue generating product according to any of the preceding claims being a bone generating product which further comprises an effective amount of calcium containing compound dispersed in said matrix (for inducing the formation of the bone tissue).

20 11. The bone generating product of claim 10 wherein said effective amount of calcium containing compound is inorganic particle containing calcium phosphate and having a mean particle size lower 750  $\mu\text{m}$ , preferably a mean particle size comprised between 150  $\mu\text{m}$  and 500  $\mu\text{m}$ .

25 12. The bone generating product according to the claim 10 or 11, wherein said calcium phosphate containing compound is selected from a group consisting of synthetic hydroxyapatite  $\text{CaCl}_2$ ,  $\beta$ tricalcium phosphate, bone particles (denatured bone or not), apatite, aspidine, calcium sulfate, calcium carbonate, hydroxyapatite (from a coral reef), calcium gluconolactate, calcium gluconate, calcium lactate, calcium glutonate and mixtures thereof.

30 13. A kit for the preparation of a sealant or tissue generating product according to any of the preceding

claims, which comprises a vial containing human growth factors, the protein scatffold elements or coagulation factor VII and possibly an effective amount of calcium compounds for inducing the formation of a tissue being a bone, or two distinct vials, a first containing one or more growth factors while the second vial containing a protein scatffold element or a coagulation factor VII, and possibly an effective amount of calcium containing compounds for inducing the formation of a tissue being a bone, and possibly a last vial which may contain at least one buffered agent and at least one antibiotic.

14. A method for the preparation of the sealant or tissue generating product according to any of the preceding claims 1 to 12, in which:

15 - a substantially homogenous mixture is formed by mixing plasma matrix with an effective amount of the protein scatffold elements or coagulation factor VII, and possibly calcium containing compounds for inducing the formation of a tissue being a bone when adding to the mixture one or more growth factors and at least one phospholipid,

- the growth factor and at least one phospholipid are added and mixed to the mixture of protein scatffold elements and coagulation factor VII, plasma matrix and possibly calcium containing compounds, and

25 - the said mixture is kept under conditions for ensuring a coagulation of the plasma matrix and the formation of the sealant or tissue generating product.

15. The method according to the claim 14, wherein the coagulation of the matrix is carried out in presence of oxygen and substantially without stirring.

16. The method according to the claims 14 or 15, wherein the coagulation is carried out at a temperature

comprised between 35 and 40°C, more preferably at a temperature of about 37°C.

17. A method for generating a tissue in a mammal patient (including the human) in need, said method 5 comprising the step of applying at the place where the tissue has to be generated the sealant and/or generating product according to any of the preceding claims 1 to 12.

18. Use of the sealant or tissue generating product according to any of the preceding claims 1 to 12 10 for the manufacture of a medicament in the treatment of tissue damages in a mammal patient (including the human).